

CLAIMS

1-3 (canceled)

4. (currently amended) The self-lubricating connector of claim 6, 26, wherein the member is formed by injection molding.

5. (currently amended) The self-lubricating connector of claim 6, 26, wherein the tubular laminate further comprises a bonding layer between the load bearing layer and the substantially planar surface of the substrate.

6. (currently amended)

~~The self lubricating connector of claim 26,~~

A self-lubricating connector comprising:

inner, intermediary, and outer cylindrical layers;

the inner and intermediary layers configured as a tubular laminate of, respectively, a lubricious plastic material bonded to a substrate, wherein the inner layer forms a load bearing layer;

the substrate having greater tensile strength than the inner layer;

the outer layer configured as a molded roller member;

the roller member fabricated from a material selected from the group consisting of thermosetting and thermoplastic resins, and combinations thereof;

the roller material having a melting point below that of the intermediary layer; and

the inner and intermediary layers being disposed in in-situ-molded relationship with the molded roller;

wherein said member is fabricated from a material selected from the group consisting of:

fluoropolymers, acetal, polycarbonate, polyimides, polyetherimide, polyetherketone (PEEK), polyethylene, polypropylene, polysulfones (e.g.,

polyethersulfone), polyamide (Nylon), polyphenylene sulfide, polyurethane, polyester, polyphenylene oxide, and blends and alloys thereof.

7. (currently amended) The self-lubricating connector of claim 6, 26, wherein the member has a substantially cylindrical surface, the tubular laminate is substantially cylindrical, and the substrate is disposed in surface to surface engagement with the substantially cylindrical surface of the member.
8. (previously presented) The self-lubricating connector of claim 7, wherein said cylindrical surface comprises an inner diameter of said member, and said load bearing layer is disposed on an inner surface of said substrate.
9. (original) The self-lubricating connector of claim 8, wherein said member further comprises an outer surface, said outer surface being substantially cylindrical and disposed concentrically with said cylindrical surface.
10. (original) The self-lubricating connector of claim 9, wherein the member comprises a wheel.
11. (currently amended) ~~The self-lubricating connector as set forth in claim 26,~~
A self-lubricating connector comprising:
inner, intermediary, and outer cylindrical layers;
the inner and intermediary layers configured as a tubular laminate of, respectively, a
lubricious plastic material bonded to a substrate, wherein the inner layer forms a load bearing
layer;
the substrate having greater tensile strength than the inner layer;
the outer layer configured as a molded roller member;

the roller member fabricated from a material selected from the group consisting of thermosetting and thermoplastic resins, and combinations thereof;
the roller material having a melting point below that of the intermediary layer; and
the inner and intermediary layers being disposed in in-situ-molded relationship with the molded roller;

wherein the substrate is fabricated from a metallic material.

12. (previously presented) The self-lubricating connector as set forth in claim 11, wherein said substrate is fabricated from steel.

13. (previously presented) The self-lubricating connector as set forth in claim 11, wherein said substrate is fabricated from aluminum.

14. (currently amended) ~~The self-lubricating connector as set forth in claim 26,~~
A self-lubricating connector comprising:

inner, intermediary, and outer cylindrical layers;
the inner and intermediary layers configured as a tubular laminate of, respectively, a lubricious plastic material bonded to a substrate, wherein the inner layer forms a load bearing layer;

the substrate having greater tensile strength than the inner layer;
the outer layer configured as a molded roller member;
the roller member fabricated from a material selected from the group consisting of thermosetting and thermoplastic resins, and combinations thereof;
the roller material having a melting point below that of the intermediary layer; and
the inner and intermediary layers being disposed in in-situ-molded relationship with the molded roller;

wherein said load bearing layer further comprises at least one filler selected from the group consisting of carbon, graphite, aluminum oxide, silicon carbide, boron nitride, silicon

nitride, glass, bronze, fluoropolymer, silicone, molybdenum disulfide, and combinations thereof.

15 (canceled)

16. (previously presented) The self-lubricating connector as set forth in claim 5, wherein said load bearing layer and said bonding layer are fabricated as a monolayer comprising a polymer blend.

17. (currently amended) ~~The self-lubricating connector as set forth in claim 16,~~

A self-lubricating connector comprising:

inner, intermediary, and outer cylindrical layers;

the inner and intermediary layers configured as a tubular laminate of, respectively, a lubricious plastic material bonded to a substrate, wherein the inner layer forms a load bearing layer;

the substrate having greater tensile strength than the inner layer;

the outer layer configured as a molded roller member;

the roller member fabricated from a material selected from the group consisting of thermosetting and thermoplastic resins, and combinations thereof;

the roller material having a melting point below that of the intermediary layer; and

the inner and intermediary layers being disposed in in-situ-molded relationship with the molded roller;

wherein the tubular laminate further comprises a bonding layer between the load bearing layer and the substantially planar of the substrate;

wherein said load bearing layer and said bonding layer are fabricated as a monolayer comprising a polymer blend; and

wherein said monolayer comprises PFA and PTFE.

18. (previously presented) The self-lubricating connector as set forth in claim 17, wherein said monolayer is alternately produced by melt extrusion if PFA is predominant and by sheet skiving if PTFE is predominant.
19. (currently amended) The self-lubricating connector of claim 6, 26, wherein the member further comprises a peripheral engagement surface adapted for engagement with another component.
20. (previously presented) The self-lubricating connector of claim 19, wherein said peripheral engagement surface is substantially cylindrical and is adapted for rolling engagement with said other component.
21. (withdrawn) A method of fabricating a self-lubricating connector comprising the steps of:
 - (a) providing a substantially planar substrate;
 - (b) fastening a load bearing layer of lubricious material onto the substrate with an adhesive film;
 - (c) applying heat and pressure to the load bearing layer, to cause the adhesive film to bond the load bearing layer to the substrate;
 - (d) forming the substantially planar surface of the substrate into a tube the load bearing layer disposed on an inner surface thereof;
 - (e) molding a member from a polymeric material; and
 - (f) disposing the substrate in surface to surface engagement with an inner tubular surface of a member, wherein the member extends circumferentially about the tube to form the self-lubricating connector.
22. (canceled)
23. (canceled)

24. (withdrawn) A roller with self-lubricating bearing, comprising:
 - a tubular insert, having:
 - an outer substrate; and
 - an inner load bearing layer bonded thereto;
 - a molded, polymeric roller;
 - the tubular insert disposed in concentric, in-situ-molded relationship with the molded, polymeric roller; and
 - the roller extending circumferentially about the tube.
25. (canceled)
26. (canceled)
27. (currently amended) The self-lubricating connector of claim 6.26, wherein the load bearing layer includes a lubricious plastic material selected from the group consisting of fluoropolymers, polyimide and aromatic ketones, and combinations thereof.